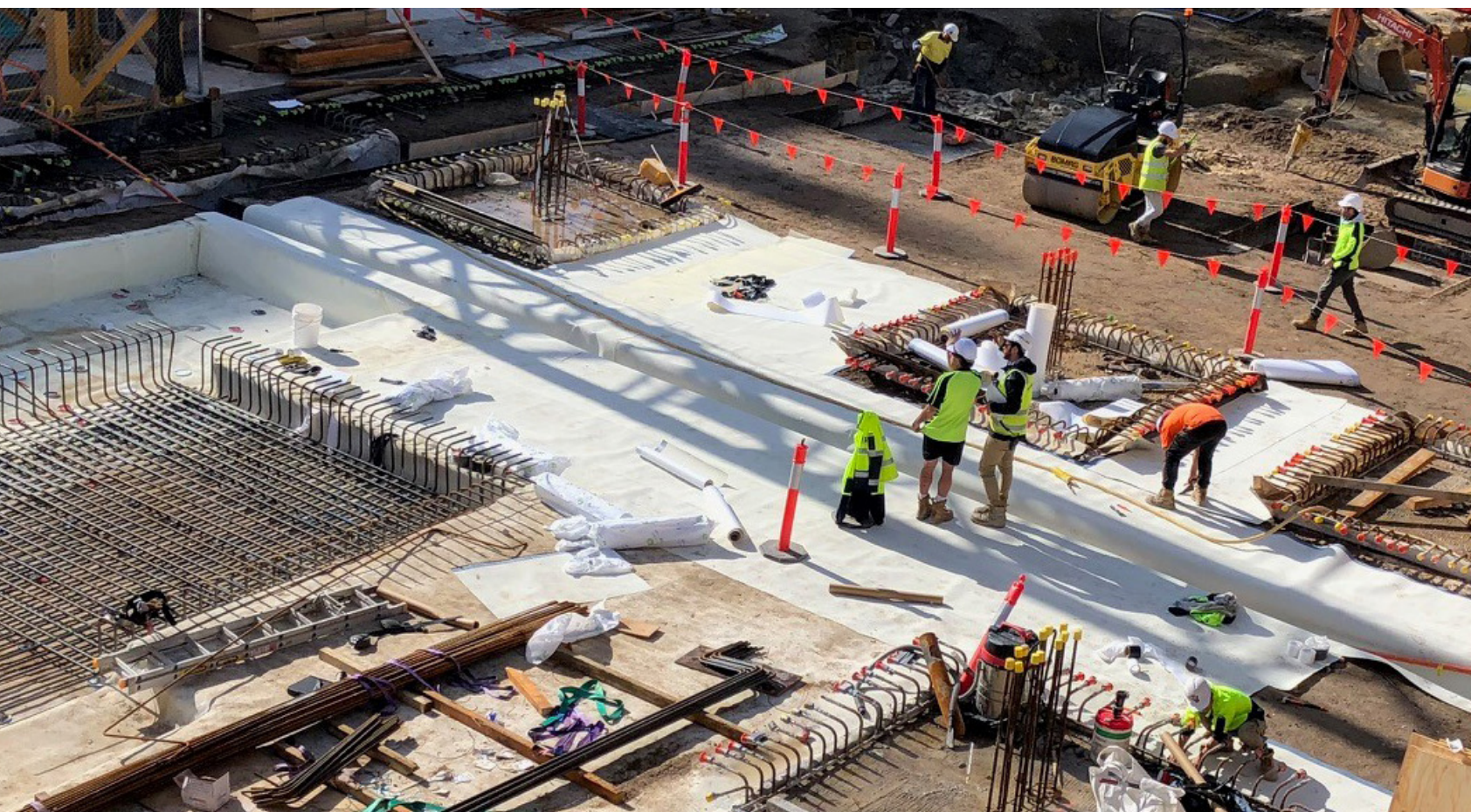




enviro**systems**  
environmentally responsible technology



# ENVIRO BSM

**FULLY BONDED BLINDSIDE MEMBRANE**

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## ABOUT US

# ENVIROSYSTEMS IS THE LEADING MANUFACTURER & SUPPLIER OF CONSTRUCTION CHEMICALS IN AUSTRALIA

Our mission is to minimise the use of damaging harmful solvents and chemicals used in the building industry by creating high performing environmentally sustainable products over a broad range of applications.

Since 2006, EnviroSystems has set the benchmark for quality and innovation for the production of Waterproofing systems, Adhesives, Coatings, Sealants, Flooring and Remedial solutions.

We are a proudly Australian Made and owned brand committed to the supply of the most environmentally sound products of their type. Ongoing consultation with builders, architects and engineers is provided on a collaborative basis to deliver optimum system solutions for a variety of project-specific needs.

From the Sydney Harbour Bridge, to state of the art hospitals, education facilities and tier one residential, commercial and industrial developments, our solutions are preferred by contractors operating across the full spectrum of the construction market.

With offices operating across Australia, our products are available for purchase globally with sales centres in Australia, New Zealand, the Asia Pacific and the Middle East.

We pride ourselves on our high level of quality assurance and continually demonstrate a commitment to, and support of, environmentally responsible technology.

Discover the EnviroSystems Difference Today...

# WHY ENVIROSYSTEMS?

- ✓ AUSTRALIAN OWNED MANUFACTURER
- ✓ DESIGNED FOR AUSTRALIAN CONDITIONS
- ✓ LOW VOC, ENVIRONMENTALLY FRIENDLY
- ✓ HIGH PERFORMANCE, LOW RISK PRODUCTS
- ✓ CUSTOM DESIGN & SPECIFICATION
- ✓ IN-HOUSE R&D LABORATORY
- ✓ EXPERT PROJECT-SPECIFIC ADVICE
- ✓ SUCCESSFUL COMPLETION OF ICONIC PROJECTS AUSTRALIA WIDE



# OUR SERVICES



## RESEARCH & DEVELOPMENT

The fields of science are ever-changing, and we make it our business to be the leader of cutting edge technology ensuring our products outperform and out serve the needs of each and every project.



## MATERIALS SCIENCE

With a fully dedicated team of scientists and engineers, we utilise our teams years of experience and expertise to deliver the latest innovations in technology.



## LOCAL MANUFACTURING

As a homegrown company, we manufacture our goods locally where they are developed and tested to ensure our products are of the highest quality with the fastest turnaround.



## SERVICE & SUPPORT

We pride ourselves not only on the quality of our products but also the comprehensive support available to our customers and clients guaranteeing full-service satisfaction.



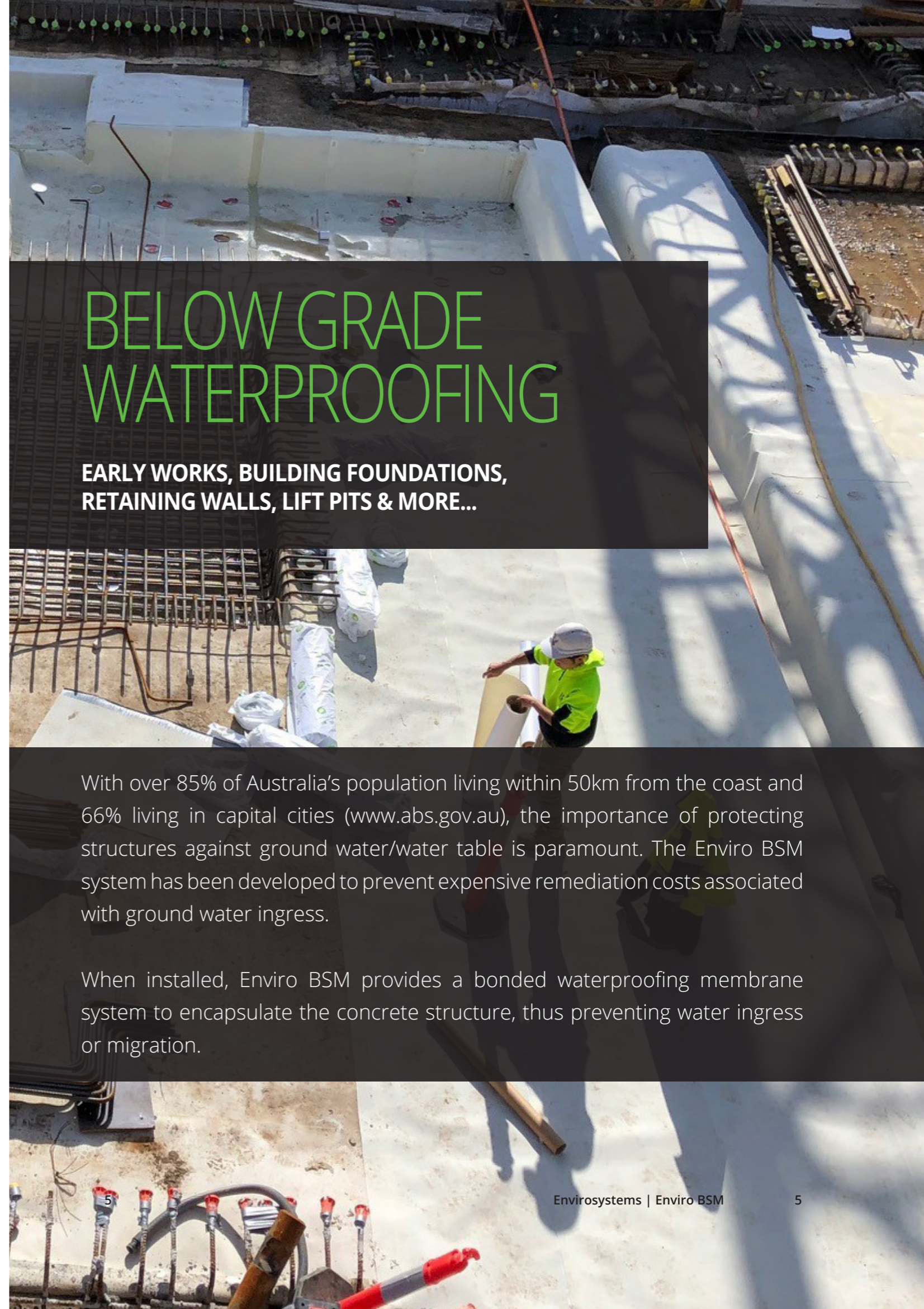
## INSPECTION & COMPLIANCE

Every product from our range is guaranteed to last. We offer a variety of warranties, backed by compliance and inspection so that you can rest assured that our products are of the highest quality



## GLOBAL PRESENCE

With offices operating across Australia, our products are available for purchase globally with sales centres in Australia, New Zealand, the Asia Pacific and the Middle East.



# BELOW GRADE WATERPROOFING

EARLY WORKS, BUILDING FOUNDATIONS, RETAINING WALLS, LIFT PITS & MORE...

With over 85% of Australia's population living within 50km from the coast and 66% living in capital cities ([www.abs.gov.au](http://www.abs.gov.au)), the importance of protecting structures against ground water/water table is paramount. The Enviro BSM system has been developed to prevent expensive remediation costs associated with ground water ingress.

When installed, Enviro BSM provides a bonded waterproofing membrane system to encapsulate the concrete structure, thus preventing water ingress or migration.

# ENVIRO BSM

## FULLY BONDED BLINDSIDE MEMBRANE



Enviro BSM is a pre-applied composite HDPE sheet membrane layer system designed to waterproof the blindside of concrete slabs and walls, providing complete protection of any structure from groundwater ingress. A unique and construction friendly feature of Enviro BSM is that it has a trafficable granular surface layer allowing tradespersons to conveniently carry on their work during the installation phase.

With a claimed adhesion exceeding 5,000Nm the pressure sensitive adhesive layer ensures it fully bonds to the blindside of the concrete slab. When installed, Enviro BSM provides a fully bonded waterproofing membrane system to encapsulate the concrete structure. It also can be used as a methane gas barrier when construction is being undertaken on reclaimed land or where the presence of methane is detected.

**THE JEWEL  
BROADBEACH, QLD**



**Builder: Multiplex Size: 15,000m<sup>2</sup>**  
The Jewel will be Australia's largest beachfront mixed-use and the first absolute beach front development on the Gold Coast. Several Enviro solutions have been used across this project, including our Enviro BSM across the footprint of this build.

**CAPITAL SQUARE  
PERTH, WA**



**Builder: Multiplex Size: 12,000m<sup>2</sup>**  
This project consists of 32 levels of premium grade office space and an NLA of 54,000m<sup>2</sup>. The development is targeting a 5 Star Green Star Design, 5 Star Green Star As-Built (v3) rating and aiming for certified 5 Star NABERS energy rating.

**NEWMARKET APARTMENTS  
RANDWICK, NSW**



**Builder: Ganellen Size: 40,000m<sup>2</sup>**  
The Newmarket development is over 5 hectares in size and will be an unprecedented offering in Randwick, providing 642 residential dwellings and approximately 2,300sqm of commercial/retail accommodation.

Enviro BSM has been specified on a variety of commercial, residential and industrial projects throughout Australia and across the globe and is the preferred fully bonded, blindside waterproofing membrane of many construction companies due to its versatility and simplified installation procedure.



**BSM LIFT PIT APPLICATION**

## PRODUCT FEATURES

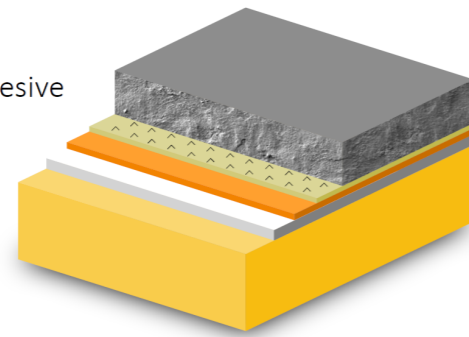
- ✓ Fully bonded
- ✓ Trafficable
- ✓ Chemical & gas resistant
- ✓ Easy application
- ✓ Fully adhered lap joints
- ✓ Steel & concrete placement can be immediate

## APPLICATIONS

- ✓ Concrete foundations & walls
- ✓ Concrete slabs on the ground
- ✓ Lift pits
- ✓ Swimming pools
- ✓ Below grade water tanks
- ✓ Cut & covered tunnels

## PHYSICAL PROPERTIES

- Blinding Substrate
- Pressure Sensitive Adhesive
- HDPE Layer
- Aggregate Layer
- Structural Slab

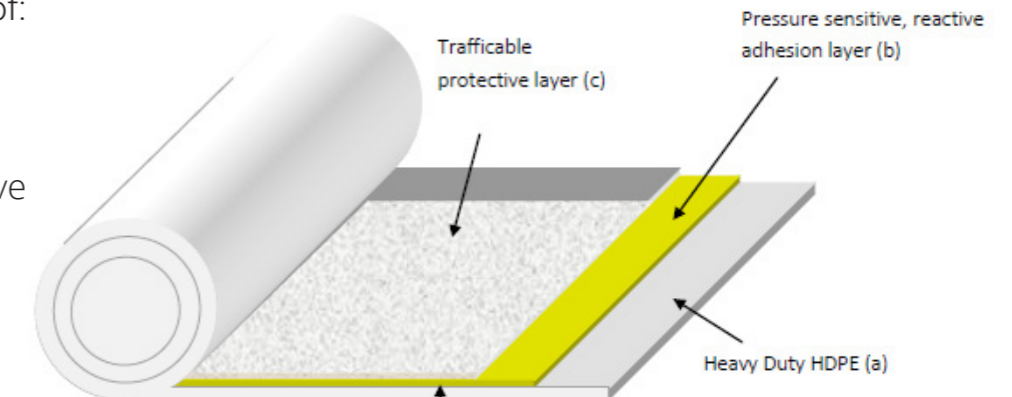


<b>COLOUR</b>	White HDPE with mixed colour protective layer
<b>FORM</b>	Roll
<b>TOTAL THICKNESS</b>	1.5mm
<b>THICKNESS OF HDPE</b>	1.2mm
<b>ROLL WIDTH</b>	1m
<b>RESISTANCE TO UV</b>	Good durability under prolonged exposure.
<b>TENSILE STRENGTH (AS1683.11)</b>	26.5MPa
<b>ELONGATION (HDPE) (AS1683.11)</b>	>400%
<b>TEAR STRENGTH (DIN535150)</b>	>400N
<b>STATIC LOADING</b>	20kg - no leaks
<b>THERMAL RESISTANCE</b>	70°C (2hrs) - no displacement
<b>BOND STRENGTH TO CONCRETE (DIN1048)</b>	>1.5N/mm
<b>LOW TEMPERATURE FLEXIBILITY</b>	-25°C - no cracking

## PRODUCT BREAKDOWN

Enviro BSM is a pre-applied, composite HDPE membrane system comprised of:

- ✓ Heavy Duty HDPE (a)
- ✓ Pressure sensitive, reactive adhesion layer (b)
- ✓ Trafficable protective layer (c)



The pressure sensitive, self-adhesive membrane (b) and fresh concrete can form an effective, impenetrable barrier as the fresh concrete infiltrates through the trafficable protective layer (c). As the mass of the structural concrete increases during the concrete pour, the pressure sensitive selfadhesive membrane is 'activated' and forms a continuous adhesive bond with the concrete poured against it. This results in excellent adhesion through the development of substantial inter-molecular forces.

After the structural concrete has cured, the space between the Enviro BSM waterproofing membrane and the structural body of the cured concrete can achieve a maximum, permanent seal, so as to eliminate the flow of water and the ingress of deteriorative agents to the structural concrete.



NEWMARKET RANDWICK APARTMENTS PROJECT, NSW

## TEST RESULTS

TEST	STANDARD	ENVIRO BSM
WATERTIGHTNESS	EN1928:2001	Pass
REACTION TO FIRE	EN16501-1 +A1:2009	Class E
JOINT PEEL PRESSURE	EN12316-2:2013	764N/50mm
TENSILE STRENGTH - LONGITUDINAL	EN12311-2:2013	1037N/50mm
TENSILE STRENGTH - TRANSVERSE	EN12311-2:2013	1007N/50mm
ELONGATION AT RUPTURE - LONGITUDINAL	EN12311-2:2013	627%
ELONGATION AT RUPTURE - TRANSVERSE	EN12311-2:2013	432%
RESISTANCE TO STATIC LOADING	EN12730:2001	20KG
ADHESION TO CONCRETE	ASTM D903	30.4lbs/in
PEEL ADHESION TO CONCRETE	ASTM D903-98	5001N/m
PUNCTURE RESISTANCE - TOP DOWN	ASTM D4833	291N
PUNCTURE RESISTANCE - BOTTOM UP	ASTM D4833	412N
PUNCTURE RESISTANCE	ASTM E154	159lbs
HYDROSTATIC HEAD PRESSURE	ASTM 5385	70m
HYDROSTATIC PRESSURE RESISTANCE	ASTM D751	192psi
WATER VAPOUR TRANSMISSION	ASTM E96	0.00935g/h.m <sup>2</sup>
WATER VAPOUR PERMEANCE	ASTM E96	0.091 Perms
RESISTANCE TO IMPACT	EN12691	0.7m
RESISTANCE TO TEARING - LONGITUDINAL	EN12310-2:2001	556N
RESISTANCE TO TEARING - TRANSVERSE	EN12310-2:2001	705N
AGAINST CHEMICALS	EN1928:2000	Pass
TENSILE & ELONGATION	ASTM D412	Pass
RESISTANCE TO DECAY (WEIGHT LOSS)	ASTM E154	0.80%
LOW TEMPERATURE FLEXIBILITY	ASTM D1970	-29° C
RESISTANCE TO DAMAGE BY FLEXING	AS 4878.9 Part B	Pass
METHANE PERMEANCE	ASTM D1434	30.4cm <sup>3</sup> /m <sup>2</sup> .Atm.day
WATER ABSORPTION	ASTM D570	0.06%
ANALYSIS FOR ASBESTOS	AS 4964:2004	Nil detected

## APPLICATOR ASSURANCE

Application of Enviro BSM is only conducted in accordance with training provided by EnviroSystems and by experienced accredited applicators only.

Our team can provide detailed membrane installation drawings, check only the dedicated application equipment is used, and ensures that manufacturer sign off occurs at critical stages throughout the project.

## RISK MITIGATION

- ✓ Accredited to Australian Standards
- ✓ Trafficable protective layer
- ✓ Cold applied - no need for open flames
- ✓ Designed & tested for local conditions
- ✓ Short term UV resistance
- ✓ 100% bonded to substrate
- ✓ High elongation
- ✓ Detailed procedures manual & installation drawings
- ✓ Onsite quality assurance



# envirosystems

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